Hysterical Abdominal Distention Simulating Acute Intestinal Obstruction

With Report of a Case

PHILIP R. WESTDAHL, M.D., *San Francisco*

SUMMARY

In hysterical abdominal distention the symptoms may so closely simulate those of obstruction of the bowel that needless laparotomy is carried out.

Clues that indicate hysterical distention rather than organic cause are: (1) History of vomiting but without dehydration; (2) complaint of severe pain although temperature, pulse and the number of leukocytes in the blood all are normal; (3) normal tympanic quality of the abdomen; (4) distention out of proportion to the amount of gas observed in x-ray examination; (5) pronounced lordosis caused by thrusting the abdomen forward; and (6) remission of distention when the patient is under general anesthesia.

It must be remembered, however, that even when there is strong suspicion of hysterical cause, distention may actually be due to obstruction. In the case herein reported, obstructive adhesion finally did occur after the patient had had numerous exploratory operations in which the viscera were observed to be normal.

OF the many causes of acute intestinal obstruction, postoperative adhesion is one of the most common. A patient who complains of nausea, vomiting, abdominal pain and obstipation, and who has a distended abdomen with an operative scar, must be assumed to have intestinal obstruction until this is disproved. Delay in operating if obstruction is present may be disastrous. On the other hand, even the most experienced surgeons have occasionally been misled into operating because of symptoms of severe obstruction, only to find the bowel normal and nothing within the abdomen to account for the preoperative appearance.

Hysterical abdominal distention has been known for over a hundred years. The so-called "phantom tumors" and pseudopregnancies are a manifestation of this entity. Alvarez[1] in 1949 published the most recent report on the subject and the reader is referred to his paper for a complete review of the literature and an analysis of the various factors involved in the mechanism of the distention. In that report Alvarez stated: "The pronounced bloating is not due to any excess of gas in the digestive tract but apparently to a contraction of the muscles lining the back and upper end of the abdominal cavity and a relaxation of the muscles of the anterior abdominal wall. These changes, associated often with the assumption of an extremely lordotic posture, tend to throw the abdominal contents forward and somewhat downward toward the pelvis." In support of the hysterical nature of these factors is the observation by many investigators, as far back as 1855,[6,8] that the distention disappears suddenly without the passage of gas when the patient is given a general anesthetic.

Alvarez reported 92 cases of varying severity, but stated that cases in which symptoms resemble those of true intestinal obstruction are rare. Goldschmidt,[5] Christianson,[4] Bargen,[3] and Purves-Stewart,[7] among others, have reported cases simulating obstruction. Bargen's first report in 1931 included five cases at the Mayo Clinic, in one of which there was fecal vomiting for several days; exploration revealed no evidence of obstruction in any of the five cases.

DIAGNOSTIC AIDS

There are several valuable diagnostic clues in distinguishing between hysterical distention and true intestinal obstruction, but in some cases the differentiation may be so difficult that the surgeon is forced to operate in spite of suspicion of hysteria. These clues are manifested by a series of discrepancies. Although patients with hysterical distention give a history of vomiting, perhaps of several days' duration, they are not dehydrated. They may cry and complain so bitterly of abdominal pain and tenderness that the examiner even suspects strangulation and localized peritonitis, yet have normal temperature and pulse and no increase in leukocytes in the blood. In such cases the distended abdomen is not abnormally tympanitic and, most noteworthy of all, the distention is out of proportion to the amount of gas observed in roentgen examination. Because of the tendency for the abdominal contents to be pushed forward and downward by the patient's abnormal posture, most of the gas present may be low in the abdomen or pelvis. The examiner should look for the lumbar lordosis which in some cases is so pronounced that a hand can be easily passed between the bed and the patient's back. A

From the Surgical Service of the Stanford University School of Medicine at the San Francisco City and County Hospital, Department of Public Health.

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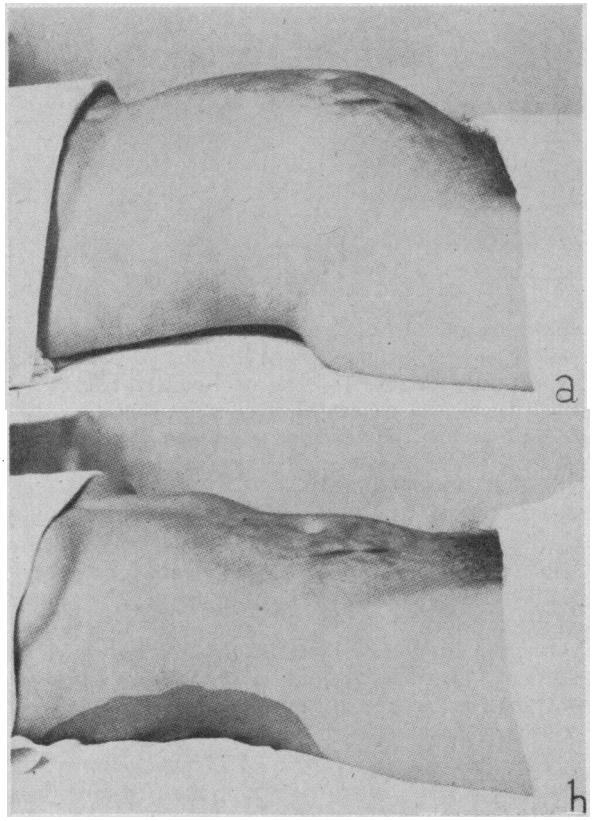

Figure 1.—Photograph of a patient of Bargen showing: *A*, before, and *B*, after induction of splanchnic anesthesia, injection of physiologic saline, injection of thionembutal, and other manipulations which distracted the patient's attention. (From Bargen, Adson, Lundy and Dixon in the American Journal of Digestive Diseases.) The appearance and response of this patient is almost identical to that in the case herein reported.

simple test, reported by Bargen,[3] is to turn the patient on his side and flex him into jack-knife position, overcoming the lordosis, whereupon the apparent distention will usually subside or disappear entirely. Most conclusive of all is the rapid disappearance of the distention, without the passage of gas, upon administration of a general anesthetic. The distention may recur with return to consciousness. Bargen[3] reported relief of distention by a bilateral splanchnic block. He used procaine on one occasion and normal saline on another in the same patient. (Figure 1.) It is important to remember, however, that some patients with hysterical distention may actually have an abnormal amount of gas from some other cause, such as air swallowing; and, even more important, that in some cases true obstruction may be present, particularly if previous abdominal exploration has been carried out.

TREATMENT

Once the diagnosis is established, treatment is largely psychiatric. Operation is definitely contraindicated. Laparotomy, sympathectomy, splanchnicectomy, phrenicotomy, resection of presacral nerves, ileocolostomy and other procedures have been tried and have failed. Gastrointestinal suction and enemas during an attack are of no avail. Lumbar sympathetic and splanchnic nerve blocks may have a psychological value. Drugs such as Pitressin,® Prostigmine® and Etamon® have been of no help. Alvarez,[2] pessimistic about treatment and prognosis, said that most patients with hysterical abdominal distention are incurable because of hysterical temperament, poor insight and lack of desire to cooperate in psychiatric treatment. Many become addicted to narcotics.

CASE REPORT

This report is compiled from letters and personal conversations with most of the physicians who have attended the patient, and from personal observation in 1947 and again in 1949. In view of the fact that the patient has been hospitalized some 20 times and operated upon 12 times with an almost identical episode of pseudo-bowel obstructions on each occasion, no attempt is made to describe the details of each instance; they are summarized in Table 1. The following describes the author's observations.

The patient, a woman 23 years of age at the time of this report, had an appendectomy at the age of 10. In 1944, at the age of 17, a viable male child was delivered by cesarean section. This was followed by three laparotomies in 1945 and a fourth in January of 1946 for what the patient described as bowel obstruction. (These have not been verified.) On April 24, 1946, operation was done in Redding, California, because of progressive abdominal distention, nausea and vomiting. No abnormality was noted. The symptoms remained unchanged postoperatively. On May 11, 1946, exploration was carried out at Stanford University Hospital in San Francisco because of symptoms of intestinal obstruction. No obstruction was observed. The patient returned to the hospital two weeks after discharge with similar symptoms but on this entry the functional nature of the illness was more evident and the patient was treated conservatively. On both entries at Stanford University Hospital the patient complained bitterly of pain and the abdomen appeared to be greatly distended, but there was no significant elevation of temperature or of the number of leukocytes in the blood, and in roentgenograms of the abdomen no significant increase in gas or dilatation of the bowel were observed. In July and August, 1946, laparotomy was done at Fitzsimmons General Hospital. The preoperative diagnosis in each instance was intestinal obstruction. It was noted on these occasions that the abdominal distention disappeared when the patient was anesthetized at the time of operation. Psychiatric interviews during convalescence were of no avail. The patient was hospitalized for similar complaints in January 1947 in Redding, but left the hospital before treatment could be evaluated.

On October 29, 1947, the patient entered San Francisco City and County Hospital with complaint of abdominal cramps and increasing distention for three days. The abdomen was greatly distended and there was generalized tenderness. On this occasion, peristalsis was hyperactive. There was no fever and leukocytes in the blood numbered 10,200 per cu. mm. with 82 per cent neutrophils. A roentgenogram showed only a small amount of gas in the small bowel and gas in the sigmoid colon but no evidence of obstruction. Suction was started with a mercury-weighted tube. Six hours later, although the abdomen still appeared to be distended, in a second roentgenogram (Figure 2) no gas was observed in the small bowel, and there was more gas in the colon but no distention. Leukocytes in the blood numbered 8,900 per cu. mm. and the temperature was 99° F. The patient complained of severe abdominal pain. The diagnosis of volvulus with a closed-loop obstruction was considered and operation was advised but the patient at first refused to consent on the grounds that nothing had been found in previous laparotomies. The next day, however, at the insistence of

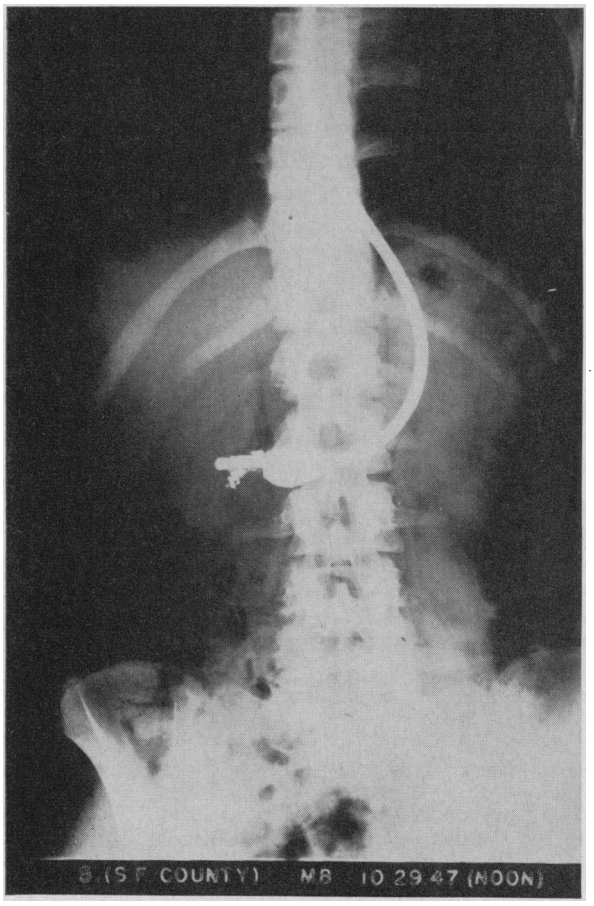

Figure 2.—Roentgenogram taken at San Francisco Hospital at the height of the patient's pseudodistention, revealing no significant gas in the bowel.

the surgical staff, she consented to operation. With the patient under spinal anesthesia, laparotomy was carried out. There were remarkably few adhesions and no evidence of dilatation or obstruction of either small or large bowel. The other abdominal viscera were likewise normal. The patient remained in the hospital for five weeks. During most of that time the abdomen remained distended and the patient complained so bitterly of abdominal pain that on one occasion laparotomy was again considered; but in view of the lack of roentgenographic evidence of gas it was deferred. In repeated roentgenograms following barium by mouth and barium enema no evidence of obstruction was observed. No abnormality was observed in proctoscopic examination. A neurogenic basis was suspected, but results of neurological examination and of spinal fluid analysis were normal. Tetraethylammonium chloride was given to block sympathetic control of the colon, but without benefit. Spinal anesthesia, using 100 mg. of procaine crystals in 2 cc. of spinal fluid injected between L_2 and L_3, produced anesthesia to the nipple line but had no effect on the abdominal distention. The patient frequently had over-emotional reactions such as sobbing and crying spells and sudden changes of mood. When it was finally noted that there was pronounced lumbar lordosis and that in spite of the prolonged period of distention the general condition and the nutritional status of the patient remained very good, psychiatric consultation was obtained. Immediately following the interview, the patient demanded to be released. She dressed and walked out of the hospital, appearing to be in excellent health.

In September 1948 the patient was hospitalized in Redding for one week with the usual pronounced abdominal distention and complaint of pain but with normal pulse and temperature. No abnormality was observed roentgenographically. Operation was not done and the symptoms gradually subsided. Again at Redding in December 1948, true obstruction occurred for the first time. On this occasion, the temperature and pulse did rise and fecal vomiting was noted. No immediately preoperative x-ray film was obtained as laparotomy was done in emergency. A small band crossed the ileum, which appeared to be obstructed with injection of adjacent bowel. Recovery was uneventful. Less than a month later the patient entered Washoe General Hospital in Reno, Nevada, with clinical signs of obstruction but no abnormality observed in a roentgenogram. A mercury-weighted tube was passed to the ileum but the distention did not subside after one week. In x-ray examination with barium enema no obstruction was observed. As the patient did not appear to improve, laparotomy was done. The surgeon noted dilation of the cecum and considered the ascending colon to be incompletely rotated and partially obstructed. A right colectomy and ileotransverse colostomy was done. Postoperatively the suction tube emerged through the anus, conclusively ruling out obstruction, but the distention remained. Another episode in March 1949 required hospitalization in Idaho, but due to the neurotic appearance of the patient and a normal roentgenogram, functional distention was diagnosed. When a request for morphine was refused, the patient anxiously left the hospital. Next hospitalized in Elko, Nevada, in July 1949 the patient was spared exploration when the distention suddenly disappeared as general anesthesia was given on the operating table. The distention was also relieved on two subsequent occasions by intravenous injection of Pentothal® and again by ethyl chloride, but each time suddenly recurred when the patient regained consciousness. At St. Mary's Hospital in San Francisco in August 1949 operation was withheld, despite the usual symptoms, because of a normal roentgenogram. The last known laparotomy was September 28, 1949, at Salt Lake County Hospital. The abdomen was described as "surprisingly clear" with two small adhesions but no obstruction. On discharge the patient went to another local hospital, but when the facts of the previous admission were obtained she was discharged. In November the patient returned to Redding and there requested colostomy, which was refused.

COMMENT

The case reported is typical of hysterical abdominal distention closely resembling acute intestinal obstruction. The over-emotional complaint of pain, the apparent abdominal distention out of proportion to the amount of gas observed in roentgenograms, the pronounced lordosis, the absence of systemic signs and of leukocytosis should all be clues to those familiar with this entity. The sudden disappearance of distention with general anesthesia is an extremely helpful diagnostic aid. In the author's own experience with the patient, it was his familiarity with the disastrous outcome of delay in operating in the presence of true obstruction and his lack of familiarity with hysterical distention which made him overlook the proper diagnosis and insist that the patient have another laparotomy. On some occasions the picture was complicated by the appearance of a moderate amount of gas particularly in the large bowel as seen on roentgenograms. This can be accounted for on the basis of air swallowing (the stomach frequently contained air) and by the re-

TABLE 1.—*Summary of Hospital Entries and Operations*

Date	Hospital	Clinical Diagnosis	X-ray Diagnosis	Operation
1937	.....	.....	.....	Appendectomy
1944	.....	.....	.....	Cesarean
Jan. 1945	.....	Intestinal obstruction	.....	Laparotomy
Aug. 1945	.....	Intestinal obstruction	.....	Laparotomy
Oct. 1945	.....	Intestinal obstruction	.....	Laparotomy
Jan. 1946	.....	Intestinal obstruction	.....	Laparotomy
April 21 to 30, 1946	Redding	Intestinal obstruction	No obstruction	No obstruction
May 9 to 25, 1946	Stanford	Intestinal obstruction	No obstruction	No obstruction
May 29 to 31, 1946	Stanford	Abdominal distention	No obstruction	None
July 14, 1946	Fitzsimmons	Intestinal obstruction	No obstruction	No obstruction
Aug. 30, 1946	Fitzsimmons	Intestinal obstruction	No obstruction	No obstruction
Jan. 6 to 7, 1947	Redding	Abdominal distention	No obstruction	None
Oct. 29 to Dec. 8, 1947	S. F. County	Intestinal obstruction	No obstruction	No obstruction
Sept. 2 to 11, 1948	Redding	Abdominal distention	No obstruction	None
Dec. 13, 1948, to Jan. 6, 1949	Redding	Intestinal obstruction	Early obstruction, no preoperative film	Obstruction
Jan. 22 to March 17, 1949	Reno	Intestinal obstruction	No obstruction	No obstruction
March 22 to 24, 1949	Idaho	Abdominal distention	No obstruction	None
July 1949	Elko	Intestinal obstruction	No obstruction	None
Aug. 23 to 27, 1949	St. Mary's	Intestinal obstruction	No obstruction	None
Sept. 27 to Oct. 23, 1949	Salt Lake	Intestinal obstruction	No obstruction	No obstruction
Nov. 1949	Redding	Abdominal distention	No obstruction	None

Stated entries for abdominal distention	19
Stated operations for abdominal distention	12
Verified operations for abdominal distention	8
Verified obstruction	1

peated therapeutic colonic flushes given during the preceding three years, thus interfering with the normal function of the colon. The most important lesson to be learned from this case is that true obstruction can occur in some such cases, as it did once in the present instance. Unless the diagnosis of hysterical abdominal distention can be definitely established and true obstruction ruled out, exploration is mandatory if the patient does not improve.

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